

*D2* 52. (Amended) The method of claim ~~30~~ further comprising introducing the dissolved carboxylate-alumoxane nanoparticles to a ceramic support.

*D2* 53. (Amended) The method of claim ~~52~~ <sup>14</sup> wherein deposition of the nanoparticles takes place on the support.

*D3* 54. (Amended) The method of claim ~~30~~ further comprising infiltrating the dissolved carboxylate-alumoxane nanoparticles to a ceramic support.

*D4* 54. (Amended) The method of claim ~~30~~ further comprising dip-coating a fiber in the solution of re-dissolved carboxylate-alumoxane nano-particles and solvent, wherein the fiber is the substrate on which the nanoparticles are deposited in the evaporating step.

*D4* 54. (Amended) The method of claim ~~30~~ wherein the dried nanoparticles are fired slowly at a temperature sufficient to burn off organic constituents.

*D5* 55. (Amended) The method of claim ~~30~~ wherein the dried nanoparticles are fired at a temperature between 25°C and 225°C.

*D5* 55. (Amended) The method of claim ~~54~~ further comprising holding the nanoparticles at a temperature of 225°C for 30 minutes.

*D5* 56. (Amended) The method of claim ~~54~~ <sup>35</sup> wherein the nanoparticles are fired at a temperature that is ramped from 25°C to 225°C at a rate of 1°C per minute.

*D6* 57. (Amended) The method of claim ~~56~~ <sup>31</sup> further comprising holding the nanoparticles at a temperature of 225°C for 30 minutes.

*D6* 58. (Amended) The method of claim ~~30~~ further comprising holding the nanoparticles at a temperature of 300°C for 80 minutes.

~~10~~ (Amended) The method of claim ~~79~~ further comprising firing the nanoparticles by ramping the temperature to 1100°C at a rate of 2°C per minute.

~~11~~ (Amended) The method of claim ~~79~~ further comprising holding the nanoparticles at a temperature of 1100°C for 400 minutes.

~~12~~ (Amended) The method of claim ~~79~~ further comprising cooling the nanoparticles slowly to room temperature.